



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

APR 14 2000

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 8096
(FOURTH REVISION)

EXPIRATION DATE: February 28, 2002

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Scott High Pressure Technology
Plumsteadville, PA
(Former grantee: Scott Specialty Gases,
Incorporated)
2. PURPOSE AND LIMITATIONS:

This exemption authorizes the manufacture, mark, sale and use of a non-DOT specification cylinder for the transportation in commerce of flammable and nonflammable gases. This exemption provides no relief from any regulation other than as specifically stated herein.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302(a)(1), § 173.304, and § 175.3 in that the prescribed packaging is not authorized, and portions of § 178.35 and § 178.42 as described herein.
5. BASIS: This exemption is based on the application from Scott High Pressure Technology dated March 21, 2000 submitted in accordance with § 107.109 and supplemental information dated March 31, 2000.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi- fication Number	Packing Group
Ethylene, compressed	2.1	UN1962	N/A
Oxygen, compressed	2.2	UN1072	N/A
Air, compressed	2.2	UN1002	N/A
Carbon dioxide	2.2	UN1013	N/A
1,1-Difluoroethylene or Refrigerant gas R 1132a	2.1	UN1959	N/A
1,2-Dichloro-1,1,2,2- Tetrafluoroethane or Refrigerant gas R 114	2.2	UN1958	N/A
Chloropentafluoroethane or Refrigerant gas R 115	2.2	UN1020	N/A
Hexafluoroethane, compressed or Refrigerant gas R 116	2.2	UN2193	N/A
1-Chloro-1,2,2,2- tetrafluoroethane or Refrigerant gas R 124	2.2	UN1021	N/A
1-Chloro-2,2,2-trifluoroethane or Refrigerant gas R 133a	2.2	UN1983	N/A
1,1-Difluoroethane or Refrigerant gas R 152a	2.1	UN1030	N/A
Dichlorodifluoromethane and difluoroethane azeotropic mixture or Refrigerant gas R 500 <i>with approximate 74 percent dichlorodifluoromethane</i>	2.2	UN2602	N/A
Chlorodifluoromethane and chloropentafluoroethane mixture or Refrigerant gas R 502 <i>with fixed point, with approximately 49 percent chlorodifluoromethane</i>	2.2	UN1973	N/A

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Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi- fication Number	Packing Group
Dichlorodifluoromethane or Refrigerant gas R 12	2.2	UN1028	N/A
Chlorodifluorobromomethane or Refrigerant gas R 12B1	2.2	UN1974	N/A
Chlorotrifluoromethane or Refrigerant gas R 13	2.2	UN1022	N/A
Bromotrifluoromethane or Refrigerant gas R 13B1	2.2	UN1009	N/A
Tetrafluoromethane, compressed or Refrigerant gas R 14	2.2	UN1982	N/A
Dichlorofluoromethane or Refrigerant gas R 21	2.2	UN1029	N/A
Chlorodifluoromethane or Refrigerant gas R 22	2.2	UN1018	N/A
Refrigerant gases, n.o.s.	2.2	UN1078	N/A
Refrigerant gases, n.o.s or Dispersant gases, n.o.s.	2.1	NA1954	N/A
Nitrogen, compressed	2.2	UN1066	N/A

7. PACKAGING(S) and SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification steel cylinder made in conformance with § 178.35 and DOT Specification 3E (§ 178.42) except as follows:

§ 178.35(f) (1) (i) Markings. Substitute "DOT-E 8096-1800" for "DOT 3E1800." All other markings are required.

§ 178.35(g) Inspector's report. Applicable inspection reports required are:

1. Inspectors certification.
2. Record of chemical analysis.
3. Flattening test.

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§ 178.42(a) Type, size, and service pressure. Seamless tubing partially closed in at either end with closure on either end by circumferentially welded end caps. Cylinder not over 90 cubic inch water capacity. Longitudinal seams and welded tubing prohibited. Service pressure. Must be 1800 psig.

§ 178.42(b) Steel.

1. Aluminum killed 1010 seamless tubing of uniform quality. Content percent for the following not over: Carbon 0.12, manganese 0.50, phosphorous 0.04, and sulfur 0.05 (ladle analysis), or
2. Cold drawn seamless type 4130 alloy tubing. Content percent for the following not over : carbon (0.25-0.35), manganese (0.40-0.90), phosphorus (0.04 max.), sulfur (0.05 max), silicon (0.15-0.35), chromium (0.80-1.10), molybdenum (0.15-0.25).

§ 178.42(d) Manufacture. Second sentence is deleted.

§ 178.42(f) (2) The cylinder referred to in paragraph (f) (1) of this section must burst at a pressure higher than 6,000 psi without fragmenting or otherwise showing lack of ductility, and one additional cylinder in the same lot of 500 must be subjected to a 3000 psi test and subsequently to a flattening test between knife edges with the circumferential joint at a right angle to the plates. The knife edges must be 60° wedge shaped rounded to 1/2 inch radius. Flattening to six times the thickness of the seam joint without cracking is required. The last sentence is deleted.

§ 178.42(f) (3) Other cylinders must be examined under hydrostatic pressure of at least 3000 psig and show no defect. The pressure must be maintained for at least 30 seconds and sufficiently longer to insure complete examination.

§ 178.42(g) Leakage test. All cylinders must be tested for leakage by internal air or gas at 1800 psig following the hydrostatic test. Leakers must be rejected.

b. OPERATIONAL CONTROLS - Cylinders must be shipped in strong outside packagings in conformance with § 173.301(k). Each cylinder must be secured against rotational movement within the outside packaging.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this exemption for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this exemption.

b. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this exemption and the HMR.

c. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this exemption must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Exemptions and Approvals for a specific manufacturing facility.

e. A current copy of this exemption must be maintained at each facility where the package is manufactured under this exemption. It must be made available to a DOT representative upon request.

f. Charging of cylinders with liquefied gases must conform to the requirements in § 173.304.

g. Ethylene is forbidden for shipment by passenger-carrying aircraft.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo aircraft only and passenger-carrying aircraft (See restrictions in paragraph 8.g. of this exemption).

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel or aircraft used to transport packages covered by this exemption. The shipper must furnish a copy of this exemption to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

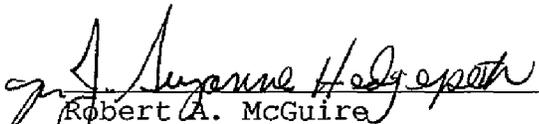
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, Parts 171-180.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by § 172.700 through § 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued at Washington, D.C.


Robert A. McGuire
Acting Associate Administrator
for Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

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The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained from the AAHMS, U.S. Department of Transportation, 400 7th Street, SW, Washington, DC 20590-0001, Attention: Records Center, 202-366-5046.

PO: sln00